



Case report

Novel psychoactive substance intoxication resulting in attempted murder

Richard Stevenson^{a,*}, Laurence Tuddenham^b^a Emergency Department, Glasgow Royal Infirmary, 84 Castle Street, Glasgow G4 0SF, UK^b Glasgow Forensic Mental Health Services, Douglas Inch Centre, 2 Woodside Terrace, Glasgow G3 7UY, UK

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ABSTRACT

A man in his twenties who had no previous history of violence, snorted large quantities of two substances he identified as 3-methoxyphencyclidine (3-MeO-PCP), and methylenedioxypyrovalerone (MDPV); both are recognised as novel psychoactive substances, or commonly described in the media as “legal highs”. He also inhaled butane gas. He experienced vivid hallucinations and developed bizarre ideas. During this state of mind he stabbed his father multiple times and was arrested and charged with attempted murder. He had a previous history of drug induced psychosis and although he had some slight residual symptoms before he consumed the substances, these were not considered relevant to his criminal liability at the time of the offence. The hallucinations caused by the use of these substances took six weeks to completely recede. He was convicted of attempted murder and sentenced to four years in prison.

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1. Introduction

The subject was seen by one of the authors (LT) to prepare a pre-trial psychiatric report. He had been charged with the attempted murder of his father. Mr X had a history of regular recreational use of a wide range of illicit drugs between the ages of 14 and 20. In his early twenties he became dependant on heroin, and was prescribed methadone which led to a reduction in his use of illicit drugs. He continued to use illicit drugs periodically, and also started using novel psychoactive substances regularly, which he obtained over the internet. He was a self-described “drug tester” for websites who sold novel psychoactive substances (NPS). He reported that the websites provided him with free samples of new drugs in exchange for him reporting on his drug experiences on internet forums for users of these drugs.

His medical history included asthma in childhood. He had a previous diagnosis of drug induced psychosis made about a year and a half before his presentation. At that time he had started hearing voices during a period when he was regularly inhaling butane gas. He also reported visual hallucinations of spiders and experiencing vivid dreams. The voices persisted, although of a reduced intensity after he stopped inhaling butane gas and he was treated with the antipsychotic risperidone. His hallucinations

responded well to treatment but he stopped taking risperidone because of side effects. He continued to experience hallucinations or voices repeating his thoughts up until the time of the offences. Throughout this period he recognised that his drug use was the cause of his psychotic symptoms.

Mr X bought drugs advertised as 3-methoxyphencyclidine (3-MeO-PCP), and methylenedioxypyrovalerone (MDPV), on the internet. On the night of the offences he insufflated large quantities of both drugs and also inhaled part of a butane gas canister. He experienced vivid hallucinations, both auditory, visual and tactile. He could hear his friends talking to him from pictures in the room and when he closed his eyes he experienced panoramic visual hallucinations which he called “full blown eyes closed visuals”. He remembered meeting spirits of dead people, travelling to different worlds and having a girlfriend with whom he had children. When he opened his eyes he recalled that he could shoot fire balls from his fingers at will. He said that he could feel people touching him. During the course of the evening he remained orientated in time, place and person. He recalled that he developed ideas that the house could be used as a base for super heroes, and following this logic, he would need to get rid of his father who lived in the house. He heard a voice saying “kill him” and says he immediately obeyed this without reflection. He said that his father only survived the attack because neighbours heard his screams and called an ambulance. When Mr X was arrested he was found lying in a stuporous state in his bedroom. After his arrest he continued to experience visual hallucinations especially when he closed his eyes.

* Corresponding author.

E-mail address: richard.stevenson@nhs.net (R. Stevenson).

The visual hallucinations gradually improved to the extent that his mental state returned to its pre-offence state. He continued to hear a voice inside his head that repeated his own thoughts when he felt under stress. There were no other symptoms of schizophrenia such as delusional beliefs or thought disorder.

He continues to complain of hearing voices which repeated his own thoughts occurring on a daily basis. He was therefore commenced on risperidone at a low dose.

2. Discussion

NPS have been defined by the United Nations Office on Drugs and Crime as “substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Convention or the 1971 Convention, but that may pose a public health threat.”¹ The pharmacological characteristics of such compounds are often unknown; substances within the same class of drug may exhibit markedly different effects.

There is a paucity of data on 3-MeO-PCP and its clinical effects. 3-MeO-PCP is an analogue of methoxetamine, a ketamine-like compound with dissociative effects²; the 3-methoxy group is thought to be responsible for the euphoria experienced by users.³ Pharmacologically, ketamine’s main action is on glutamate, the major excitatory neurotransmitter in the brain. It is a non-competitive agonist at one of the three glutamate receptors: the N-methyl D-aspartate (NMDA) receptor⁴; 3-MeO-PCP is one of the most potent known NMDA antagonists.⁵

MDPV is a stimulant NPS with clinical effects similar to cocaine; its primary mode of action is as a catecholamine reuptake inhibitor, and is a more potent dopamine reuptake inhibitor than cocaine.⁶ Agitation is a common effect of MDPV intoxication; invariably, a sympathomimetic toxidrome is present.^{7–13} Paranoid psychosis appears to be a common psychiatric presentation^{14,15}; in a case series by Spiller et al., behaviours associated with MDPV intoxication included self-inflicted (fatal) gunshot during an active delusional episode, jumping out of a window to escape non-existent pursuers; requiring a TASER and eight responders to subdue the patient; repeatedly firing guns out of the house windows at “strangers” who were not there; walking into a river in January to look for a friend who was not there; leaving a 2-year old daughter in the middle of a highway because she had to kill demons; climbing into the attic of the home with a gun to kill demons that were hiding in there, and breaking all the windows in a house and wandering barefoot through the broken glass.¹³ The psychiatric effects of repeated MDPV use may persist for up to eight months following cessation.¹⁵

3. Mental health law

Before 2012, Scots law did not recognise voluntary intoxication with drugs at the time of a violent offence as the basis of a legal defence. An accused who had become voluntarily intoxicated could be held responsible for a crime he committed in an intoxicated state, even if it was unintentional; the decision to take intoxicating substances was seen as reckless and blameworthy. In 2012 a new Act¹⁶ abolished the previous common law rules for insanity, and introduced a statutory legal definition for those not criminally responsible due to mental disorder. Only one specific disorder was excluded from the basis of the plea – “a personality disorder which is characterised solely or principally by abnormally aggressive or seriously irresponsible conduct” – this legal formula when used in the past applied to psychopathy and/or antisocial personality disorder. However it seems very unlikely that self-induced intoxication will ever be accepted as grounds for acquittal on the basis of mental disorder, in view of the possible consequences in the criminal justice system.

A drug induced psychosis could form the basis of a plea of not responsible by reason of mental disorder, or a defence of diminished responsibility in cases of murder, or as a plea in mitigation in other serious violent offences. In the present case the subject’s abnormal state of mind at the time of the offences was construed as a state of acute intoxication rather than a drug induced psychosis. The subject’s abnormal beliefs disappeared quickly as he recovered from the influence of the drugs, although he continued to experience hallucinations for 6 weeks after the offence. It is likely that he was particularly vulnerable to the psychiatric effects of the NPS, given his previous history of drug induced psychosis and his mild but chronic symptoms which were present before the offence. The authors are unaware of the evidence given at court; in light of the short length of the sentence it is speculated that mitigating factors, including the absence of a history of violence or ill-will towards the subject’s father, and the unpredictability of the dramatic effects of the drugs, may have been taken into account by the court.

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Conflict of interest

We, the authors state that we have no conflict of interest in the preparation or publication of this journal article.

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